

# ABSTRACT

A design device which designs a controller in accordance with  $H$  infinity ( $H \infty$ ) logic, in which formulae of generalized plants and formulae of control object models which are parts of the generalized plants are stored in a memory unit 3. In a parameter calculating unit including comprising a frequency response calculation unit 4 and a scaling matrix calculation unit 5, the frequency response calculation unit 4 calculates the frequency responses of the control object models, and the scaling matrix calculation unit 5 calculates a scaling matrix  $T$  in accordance with the frequency responses of the control object models so that the respective gains of the control object models are consistent. A controller calculation unit 6 calculates the parameters of a controller by applying the scaling matrix  $T$  to the generalized plants.